NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

GEORGE C. [SPACE FLIGHT CENTER] **SATURN V PROGRAM DIRECTIVE**

NUMBER: ___23___

SUBJECT: SATURN V PROGRAM COORDINATE SYSTEM STANDARDS

ORIGINAL ISSUE DATE: __Mar. 14, 1966__ REVISION NUMBER: _____

DATE OF REVISION: _____ PREPARED BY: __Systems Engineering Office, I-V-E__

I. **PURPOSE**

This directive establishes a single source of well defined coordinate system standards for data exchange purposes in the Saturn V Program.

II. **SCOPE**

This directive applies to all participants of the Saturn V Program.

III. **POLICY**

The "Project Apollo Coordinate System Standards," (PACSS) Document No. SE 008-001-1, dated June 1965, shall be the single source for all coordinate systems used in the Saturn V Launch Vehicle Program effective with vehicle SA-501.

IV. **RESPONSIBILITY**

The following action will be taken to implement the PACSS in the Saturn V Program:

A. **Modification of Specifications**

The Level II and Level III Configuration Control Boards will take appropriate action to have the PACSS specified as a requirement in the Saturn V Program Specification and all applicable Saturn V CEI Specifications.

B. **Contractual Actions**

The S-IC, S-II, S-IVB, IU, LVGSE, and SE&I project managers will take necessary contractual action to insure that respective contractors adopt the PACSS with a minimum schedule and fiscal impact to the Saturn V Program.

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C. R&DO Implementation

The R&DO Director will take necessary action to insure that R&DO personnel adopt the PACSS in all areas of Saturn V Program support efforts.
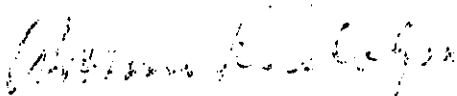
V. PROCEDURE

A. For Using PACSS

When coordinate systems are used in Saturn V Documentation, notation must be made as to which of the nineteen systems, defined in Appendix A of the PACSS document, are used by stating the appropriate system numbers.

B. For Resolving PACSS Implementation Difficulties

Any difficulties, which arise in the implementation of this directive, must be presented to the Chief, Saturn V Systems Engineering Management Office for clarification as to the appropriate action to be taken in order to comply with the requirements of this directive.

Arthur Rudolph
Manager, Saturn V Program

Distribution:
(See Page 3)

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ORIGINAL ISSUE DATE _Mar. 14, 1966_ REVISION NUMBER: _____

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

GEORGE C. [MARSHALL] SPACE FLIGHT CENTER

SATURN V PROGRAM DIRECTIVE

NUMBER: 24

SUBJECT: Apollo Parts Information Center (APIC)

ORIGINAL ISSUE DATE: March 7, 1966 **REVISION NUMBER:** _____

DATE OF REVISION: _____ **PREPARED BY:** Saturn V Reliability and Quality Office, I-V-Q Phone 876-1632

I. **POLICY**

The Saturn V program participants will supply parts/materials/
component information to the Apollo Parts Information Center
(APIC) and will use APIC services as needed.

II. **PURPOSE**

The purposes of this directive are to:

- Implement paragraph 7.3.2d of the Apollo Reliability and
  Quality Assurance Plan NHB 5300.1.

- Support Instruction MA 1450.045 which establishes the Apollo
  Parts Information Center (APIC) at MSFC.

- Provide parts/material consolidated data for the user such as:

  Information pertaining to:

  - Specific parts and materials

  - Procedures, specifications and standards

  - Program usage of specific parts

  - Performance of specific parts under selected environments

  - Functional application of parts and materials

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- Agency or contractor who qualified specific parts

- Application for which parts and materials were qualified

- Parts and materials manufactured by a specific vendor

- Vendor manufacturing of a specific part or material

- Criticality of part and material as determined by cognizant government agency or prime contractor

III. SCOPE

This directive

- Applies to all parts/material, component, subsystem, system or stage information and data resulting from Saturn V program implementation.

- Covers all Saturn V Stages, Instrument Unit, and Launch Vehicle Ground Support Equipment (LVGSE).

IV. DEFINITIONS

The term "parts/material" includes all Saturn V hardware generation levels from raw materials through parts and components for flight subsystems, systems, stages and the Launch Vehicles and all Launch Vehicle Ground Support Equipment (LVGSE).

The term parts and materials "information and data" covers information on the following:

- Parts and materials selection

- Standardization

- Standard and preferred parts lists

- Critical items list

SUBJECT: __Apollo Parts Information Center (APIC)__

ORIGINAL ISSUE DATE __March 7, 1966__ REVISION NUMBER: _____

DATE OF REVISION: _____ PREPARED BY: __Saturn V Reliability and Quality__
Office, I-V-Q   Phone 876-1632

- Specifications

- Qualification testing

- Failure Analysis and reports

- Process control

- Hardware manufacturing

- Storage

- Handling and shipping

- Inspection

- Traceability

- Data which complements the above

V.   PROCEDURES

Inputs for parts/material information and data, in the format available at the source, will be provided directly to:

Apollo Parts Information Center
George C. Marshall Space Flight Center (MSFC)
Building 4708
Huntsville, Alabama

Inquiry of requests can be made by calling:

Apollo Parts Information Center
Phone Number 205-842-3231

or

Datafax Number 8-150

or writing to the address above.

SUBJECT: Apollo Parts Information Center (APIC)

ORIGINAL ISSUE DATE March 7, 1966 **REVISION NUMBER:** _____

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Office, I-V-Q   Phone 876-1632

VI.   RESPONSIBILITIES

A. Saturn V Project (Stage) Offices:

These offices shall be responsible for:

- Providing appropriate directions to their respective con-
tractors for timely inputs to APIC of the information
and data listed in above paragraphs.

- Suggesting the use of APIC and apprising their respective
contractors of the information available for their use.

B. Quality and Reliability Assurance Laboratory (R-QUAL):

This Laboratory is responsible for:

The operation of APIC as directed by Instruction
MA-1450.045 dated February 2, 1965. APIC provides
for collection, storage, analysis, and dissemination
of parts/material information for all participants.

C. R&DO Laboratories:

These laboratories are responsible for:

Supplying parts/materials information and data on
hardware supplied for the Saturn V Program.

Arthur Rudolph
Arthur Rudolph
Manager, Saturn V Program

Reference: APIC Brochure dated September 1965

Distribution:
I-V-MGR, Dr. Rudolph
I-V-P, Mr. Sneed
I-V-T, Mr. Burns

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SUBJECT: Apollo Parts Information Center (APIC)

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